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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/972,107      | 10/05/2001  | Stephen F. Sichi     | 009447              | 4364             |

22462 7590 07/28/2004

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| EXAMINER |
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TIEU, BINH KIEN

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2643

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/972,107

Applicant(s)

SICHI ET AL.

Examiner

BINH K. TIEU

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16, 18, 20 and 22 is/are rejected.
- 7) ☒ Claim(s) 13-15, 17, 19, 21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 18, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (U.S. Pat. #: 5,874,915).

Regarding claim 1, Lee et al. ("Lee") teaches an transponder system (i.e., transmitter or antenna array system as shown in figures 1, 4 and 5), comprising:

an amplifier network having a plurality of amplifiers (i.e., a plurality of transmit modules 120A);

an antenna network, comprising a plurality of antennae (i.e., a plurality of radiating elements in the antenna array);

an output switching network, including first output switching network switch (i.e., switch 141A), selectably coupling one of the amplifiers to one of the plurality of antennae at a first output switching network switch first switch state (i.e., in first switch position, connecting one of transmit modules 120A to one of said plurality of radiating elements) and to a second

output switching network switch in a first output switch network switch second switch state (i.e., in second switch position, the switch connects to another switch via its terminals 141A3, etc.);

wherein the second output switching network switch is selectably coupled to a second one of the plurality of antennae in a second output switching network switch first switch state and to a third one of the plurality of antennae in a second output switching network switch second switch state (col.3, line 33 – col.5, line 4).

Regarding claim 2, also note signal paths between amplifiers and radiating elements in the array antenna as shown in figure 5.

Regarding claim 3, note the first switch position of switch terminal 141A in figure 5 read as a primary signal path and the switch position read on the second signal path as a backup signal path (col.4, line 64 – col.5, line 4).

Regarding claim 4, note the 16x16 transfer switches shown in figure 4 as a single rail-switching network.

Regarding claim 5, Lee further teaches an input switching network, as shown in figure 4, having a plurality of input switching network inputs (i.e., 16 input ports connected to the divider 160), a plurality of input switching network outputs (i.e., 16 output ports connected to the network 150), and a plurality of input switches selectably communicatively coupling the input switching network inputs with the input switching network outputs, and wherein the input switching network outputs are communicatively coupled to the amplifier network (col.3, line 61 – col.4, line 35).

Regarding claim 6, note divider 160 in figure 4.

Regarding claim 7, note signal paths associated with routing switch such as routing switch 141A in figure 5.

Regarding claim 8, note "Divider + Delay Lines" 152A or 152A as a single rail input switching network.

Regarding claims 9-10, note the network 130 comprising shifters 1301-1316 as shown in figure 4 operable as a driver network (col.3, lines 45-60).

Regarding claims 18, 20 and 22, Lee teaches an apparatus and a method of providing a signal to any one of a plurality of output devices, comprising the features of:

receiving the signal in a first switch (i.e., RF input is received into switch 141A);  
selectably coupling the signal to a first output device or a second switch via a first switch according to a first switch selection (i.e., in first switch position of the switch 141A, connecting one of transmit modules 120A to one of said plurality of radiating elements); and  
selectably coupling the signal from the first switch to a second output device or a third output device if the signal is not coupled to the first output device via the second switch according to as second switch selection (i.e., in second switch position, the switch connects to another switch via its terminals 141A3, etc.; col.3, line 33 – col.5, line 4).

3. Claims 11-12 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Dent (U.S. Pat. #: 6,377,558).

Regarding claim 11, Dent teaches a network, as shown in figure 5, comprising:

an first device network having a plurality of first device (i.e., amplifier column 84a having a plurality of amplifiers 85);

a second device network, having a plurality of second devices (i.e., whole antenna aperture array 82 having a plurality of antenna elements 90);

a single rail output switching network, communicatively coupling any of second devices with any of the first devices (i.e., a plurality of butler matrix rows 91-95 each connects amplifiers 85 to antenna elements 90; col.6, line 48- col.7, line35).

Regarding claim 12, Dent further teaches:

the plurality of first device include a first group of first devices and a second group of first device (i.e., amplifier matrix column 1 and amplifier matrix column 2 as shown in figure 7); and

the plurality of second devices includes a first group of second devices associated with the first group of first devices and a second group of second devices associated with the second group of first devices (i.e., a group of 4X4 butter matrices 112a - 120a associated with amplifier column 1; and a group of 4X4 butter matrices 112a' - 120a' associated with amplifier column 2; col.9, lines 10-43).

Regarding claim 16, Dent further teaches the first device network is an antenna network such as the whole antenna aperture and the first devices are antennae such as antennae elements 90 as shown in figure 5.

#### *Allowable Subject Matter*

4. Claims 13-15, 17, 19, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh K. Tieu whose telephone number is (703) 305-3963 and E-mail address: BINH.TIEU@USPTO.GOV.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz, can be reached on (703) 305-4708 and **IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (703) 306-0377 FOR THE SUBSTITUTIONS OR COPIES.**

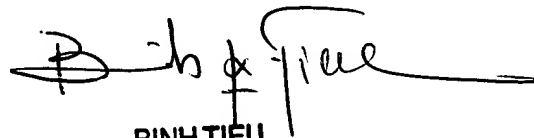
Any response to this action should be mailed to:

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Washington, D.C. 20231

Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).



**BINH TIEU**  
**PRIMARY EXAMINER**  
Art Unit 2643

Date: July 20, 2004